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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,675	10/01/2003	Harald Kropshofer	21412	8495

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PATENT LAW DEPARTMENT
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EXAMINER

YAEN, CHRISTOPHER H

ART UNIT	PAPER NUMBER
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1643

DATE MAILED: 07/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/676,675	Applicant(s) KROPSHOFER ET AL.	
	Examiner Christopher H. Yaen	Art Unit 1643	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) 7-21, 25, 28 and 31-40 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 22-24, 26, 27, 29 and 30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>10/1/03, 6/13/06</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

RE: Kropshofer et al

Election/Restrictions

1. Applicant's election with traverse of group I (claims 1-6 and 22-31) and SEQ ID No: 1 in the reply filed on 4/7/2006 is acknowledged. The traversal is on the ground(s) that the search of the different inventions would not be burdensome to search. Specifically, applicant argues that the inventions of groups I, II, and III should be rejoined because they are linked by a common linking claim. This is not found persuasive because none of the claims of group I, II, or III recite a linking type claim. It is noted that the claims are however written in dependent format and represent distinct inventions classified in separate and distinct classes and subclasses.

Applicant further argues that the different invention would not constitute a "serious burden" on the examiner and appears to argue that the peptides of SEQ ID No: 1-13 and 21 could be searched together without burden. First applicant contends that the peptides of SEQ ID No: 1-13 and 21 in groups I-IV are all classified in the same class and subclass. As such, applicant indicates that there is no distinction in classification as required by the MPEP § 808.02(A). Applicant also contends that there is no separate status in the art with regard to the peptides of SEQ ID No: 1-13 and 21. Applicant further argues that search for the different peptides would be the same because all of the peptides are MHC class II peptides and therefore constitute a similar or identical field of search. Applicant's arguments have been carefully considered but are not deemed persuasive.

Polynucleotide molecules defined by their nucleic acid sequence (hereinafter “nucleotide sequences”) that encode different proteins are structurally distinct chemical compounds. These sequences are thus deemed to normally constitute independent and distinct inventions within the meaning of 35 U.S.C. 121. Absent evidence to the contrary, each such nucleotide sequence is presumed to represent an independent and distinct invention, subject to a restriction requirement pursuant to 35 U.S.C. 121 and 37 CFR 1.141 et seq. This separation of sequence applies equally to proteins and peptides. In this case, the peptides, nucleic acids, and antibodies which bind to the said peptides of SEQ ID No: 1-13, and 21 appear to be derived from 5 different proteins (i.e. vimentin, eIF-4A1, p78, melanotransferin, and MART-1). As such, each peptide constitutes a separate and distinct search all of which are non-overlapping and not co-extensive. The search for the multiple sequences would require the review of an ever expanding library of sequence found in multiple databases resulting in search strings all of which would not result in pertinent art one for the other. Therefore, the separation of the sequences has been deemed to be burdensome and an examination of all the claimed sequences (i.e. SEQ ID No: 1-13 and 21) is proper.

Finally applicant again argues that the groups of I-III should be examined together because the claims are all linked by a “linking claim” (i.e. claim 1) and therefore “must” be examined together. Applicant’s arguments have been carefully considered but are not deemed persuasive. Applicant is directed to MPEP § 809 for a clear definition of “linking claims.” Specifically, a linking claim is defined as (A) genus claims linking species claims; and (B) subcombination claims linking plural combinations. In

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the instant case, neither "A nor "B" is present in claim 1. As such, the claim is not constructed as a "linking claim." Instead, claims of groups II-III are only dependent on claim 1. The law has long been established that dependent inventions (frequently termed related inventions) may be properly divided if they are, in fact, "distinct" inventions, even though dependent (see MPEP § 802.01).

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 1-40 are pending, claims 7-21,25,28,and 31-40 are withdrawn from further consideration as being drawn to non-elected subject matter or inventions.
3. Claims 1-6 and 22-24, 26-27, and 29-30 are examined on the merits.

Information Disclosure Statement

4. The Information Disclosure Statements filed 10/1/2003 and 6/13/2006 are acknowledged and considered. Signed copies of the IDSs are attached hereto.

Claim Objections

5. Claims 1-6, 22-24, 26-27,and 29-30 are objected to because of the following informalities: Claims recite non-elected inventions. For example claim 1 recites sequences that are drawn to non-elected inventions.

Appropriate correction is required.

Specification

6. The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code (see page 34, for example). Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01. The specification has not been reviewed to the fullest extent such that

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all possible embedded hyperlinks have been identified. It is requested that Applicant review the disclosure for any other hyperlinks and amend where appropriate.

7. The specification is further objected to on pages 34,36, and 39 for improper disclosure of biological sequences without a respective sequence identifier, i.e. a SEQ ID NOs:. Hence, the disclosure fails to comply with the requirements of 37 CFR 1.821 through 1.825. In the absence of a sequence identifier for each sequence, Applicant must provide a computer readable form (CRF) copy of the sequence listing, an initial or substitute paper copy of the sequence listing, as well as any amendment directing its entry into the specification, and a statement that the content of the paper and computer readable copies are the same and, where applicable, include no new matter, as required by 37 CFR 1.821(e-f) or 1.825(b) or 1.825(d).

Claim Rejections - 35 USC § 112, 1st paragraph

8. Claim 22 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Factors to be considered in determining whether a disclosure meets the enablement requirement of 35 USC 112, first paragraph, have been described by the court in *In re Wands*, 8 USPQ2d 1400 (CA FC 1988). Wands states at page 1404,

"Factors to be considered in determining whether a disclosure would require undue experimentation have been summarized by the board in *Ex parte Forman*. They include (1) the quantity of experimentation necessary, (2) the amount of direction or guidance presented, (3) the presence or absence of working examples, (4) the nature of the invention, (5) the state of the prior art, (6) the relative skill of those in the art, (7) the predictability

or unpredictability of the art, and (8) the breadth of the claims."

The nature of the invention

The claim is drawn to a pharmaceutical composition comprising a peptide of SEQ ID No: 1 and a pharmaceutical carrier, excipient or diluent. The invention is in a class of invention which the CAFC has characterized as "the unpredictable arts such as chemistry and biology." *Mycogen Plant Sci., Inc. v. Monsanto Co.*, 243 F.3d 1316, 1330 (Fed. Cir. 2001).

The breadth of the claims

The claims encompass a compound that is capable of being used in vivo for therapeutic purposes, in particular for the treatment of cancer

The unpredictability of the art and the state of the prior art

There is no objective evidence or guidance regarding administration of the composition in vivo. In general, treatment of cancer is at most unpredictable as underscored by Gura (Science, v278, 1997, pp.1041-1042) who discusses the potential shortcomings of potential anti-cancer agents including extrapolating from in-vitro to in-vivo protocols, the problems of drug testing in knockout mice- particularly strains which have tumor suppressor gene knockouts, and problems of clonogenic assays. Indeed, since formal screening began in 1955, thousands of drugs have shown activity in either cell or animal models, but only 39 that are used exclusively for chemotherapy, as opposed to supportive care, have won approval from the FDA (page 1041, 1st column) wherein the fundamental problem in drug discovery for cancer is that the model systems are not predictive. Gura further teaches that very few drugs tested in xenografts models

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have made it to clinical practice and that attempts to use human cells in culture don't seem to be faring any better, partly because cell culture provides no information about whether a drug will make it to the tumor site (page 1041, 3rd paragraph).

Moreover, those of skill in the art recognize that in vitro assays and or cell-cultured based assays are generally useful to observe basic physiological and cellular phenomenon such as screening the effects of potential drugs. However, clinical correlations are generally lacking. The greatly increased complexity of the in vivo environment as compared to the very narrowly defined and controlled conditions of an in- vitro assay does not permit a single extrapolation of in vitro assays to human diagnostic efficacy with any reasonable degree of predictability. In vitro assays cannot easily assess cell-cell interactions that may be important in a particular pathological state. Furthermore it is well known in the art that cultured cells, over a period time, lose phenotypic characteristics associated with their normal counterpart cell type. Freshney (Culture of Animal Cells, A Manual of Basic Technique, Alan R. Liss, Inc., 1983, New York, p4) teach that it is recognized in the art that there are many differences between cultured cells and their counterparts *in vivo*. These differences stem from the dissociation of cells from a three-dimensional geometry and their propagation on a two-dimensional substrate. Specific cell interactions characteristic of histology of the tissue are lost. The culture environment lacks the input of the nervous and endocrine systems involved in homeostatic regulation *in vivo*. Without this control, cellular metabolism may be more constant *in vitro* but may not be truly representative of the tissue from which the cells were derived. This has often led to tissue culture being regarded in a rather

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skeptical light (p. 4, see Major Differences *In Vitro*). Further, Dermer (Bio/Technology, 1994, 12:320) teaches that, "petri dish cancer" is a poor representation of malignancy, with characteristics profoundly different from the human disease. Dermer also teaches that when a normal or malignant body cell adapts to immortal life in culture, it takes an evolutionary type step that enables the new line to thrive in its artificial environment. This step transforms a cell from one that is stable and differentiated to one that is not. Yet normal or malignant cells *in vivo* are not like that. The reference states that evidence of the contradictions between life on the bottom of a lab dish and in the body has been in the scientific literature for more than 30 years. Clearly it is well known in the art that cells in culture exhibit characteristics different from those *in vivo* and cannot duplicate the complex conditions of the *in vivo* environment involved in host-tumor and cell-cell interactions.

In addition, Bellone et al. (Immunology Today, v20 (10), 1999, pp.457-462) summarize the current state of the art of peptide immunotherapy including clinical trials where "there is usually a poor correlation between induction of specific T-cells and the clinical responses" (page 457, 2nd column) and that the majority of clinical responses were limited to melanoma and prostate carcinoma (page 458). Further, Bellone et al. teach the disadvantages of peptide cancer immunotherapy in that (1) there is no direct evidence for a role in tumor rejection, (2) the therapy is applicable to few patients, (3) risk of generating tumor escape mutants, and (4) risk of autoimmune reactions (page 461, Box 1).

Working examples and Guidance in the Specification

There is no objective evidence or guidance regarding administration of the composition *in vivo*. As indicated above, there seems to be a general level of unpredictability associated with the treatment of cancer and the correlation between *in vitro* experimentation and *in vivo* outcome. The working examples disclosed in this case are limited to *in vitro* experimentation with no correlation to *in vivo* outcome or predictability. Essentially, the specification provides insufficient guidance with regard to these issues and provides no working examples which would provide guidance to one skilled in the art and no evidence has been provided which would allow one of skill in the art to predict the efficacy of the claimed pharmaceutical composition comprising the peptide of SEQ ID No: 1 would be capable of functioning *in vivo* with a reasonable expectation of success. For the above reasons, it appears that undue experimentation would be required to practice the claimed inventions with a reasonable expectation of success.

Level of skill in the art

The level of skill in the art is deemed to be high.

Conclusion

Thus given the broad claims in an art whose nature is identified as unpredictable, the unpredictability of that art, the large quantity of research required to define these unpredictable variables, the lack of guidance provided in the specification, the presence of a working example which does not address the issue of the efficacy of the control and the negative teachings in the prior art balanced only against the high skill level in the art,

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it is the position of the examiner that it would require undue experimentation for one of skill in the art to perform the method of the claim as broadly written.

Claim Rejections - 35 USC § 112, 1st paragraph

9. Claims 3,6,29, and 30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The written description in this case has only set forth a sequence of SEQ ID No: 1 and therefore the written description is not commensurate in scope to the claims that read on antigenic peptides and diagnostic peptides that comprise a peptide that contains at least one amino acid modification that enhances the binding of the peptide to MHC class II molecules.

Vas-Cath Inc. V. Mahurkar, 19 USPQ2d 1111, clearly states that “applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of *the invention*. The invention is, for purposes of the ‘written description’ inquiry, *whatever is now claimed*.” (See page 1117). The specification does not “clearly allow persons of ordinary skill in the art to recognize that [he or she] invented what is claimed.” (See *Vas-Cath* at page 1116).

Applicant is reminded that *Vas-Cath* makes clear that the written description provision of 35 USC 112 is severable from its enablement provision (see page 115). The claims recite a peptide containing “at least one amino acid modification” as part of the invention.

However, there does not appear to be an adequate written description in the specification as-filed of the essential structural (i.e. core structure) which the claimed peptide is to comprise following the claimed modification. Given its broadest reasonable interpretation, the peptide claimed can differ to such an extent that the peptide no longer comprises any amino acid found in SEQ ID No: 1 (i.e. changing all of the amino acids in the sequence). The Guidelines for the Examination of Patent Applications Under the 35 U.S.C. 112, ¶ 1 "Written Description" Requirement make clear that the written description requirement for a claimed genus may be satisfied through sufficient description of a representative number of species by actual reduction to practice, reduction to drawings, or by disclosure of relevant, identifying characteristics, i.e., structure or other physical and or chemical properties, by functional characteristics coupled with a known or disclosed correlation between function and structure, or by a combination of such identifying characteristics, sufficient to show the applicant was in possession of the genus (Federal Register, Vol. 66, No. 4, pages 1099-1111, Friday January 5, 2001, see especially page 1106 3rd column).

Applicant does not appear to have reduced to practice any peptide which comprises any amino acid modification of SEQ ID No: 1. Neither has Applicant provided a sufficient written description of any structure that may be correlated with any specific function. A peptide sequence containing at least one amino acid modification encompasses *any* sequence so long as it was originally derived from the claimed sequence of SEQ ID No: 1. Thus the genus of compounds encompassed by this term

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is extensive and the artisan would not be able to recognize that Applicant was in possession of the invention as now claimed.

Consequently, Applicant was not in possession of the instant claimed invention. See Regents of the University of California v. Eli Lilly and Co. 119 F.3d 1559, 43 USPQ2d 1398 (Fed. Cir. 1997). Adequate written description of genetic material "requires a precise definition, such as by structure, formula, chemical name, or physical properties,' not a mere wish or plan for obtaining the claimed chemical invention." Id. 43 USPQ2d at 1404 (quoting Fiers, 984 F.2d at 1171, 25 USPQ2d at 1606). The disclosure must allow one skilled in the art to visualize or recognize the identity of the subject matter of the claim. Id. 43 USPQ2d at 1406. A description of what the genetic material does, rather than of what it is, does not suffice. Id.

Applicant is directed to the Guidelines for the Examination of Patent Applications Under the 35 U.S.C. 112, ¶ 1 "Written Description" Requirement, Federal Register, Vol. 66, No. 4, pages 1099-1111, Friday January 5, 2001. Applicant is invited to point to clear support or specific examples of the claimed invention in the specification as-filed.

10. Claims 1-6, 22-24, 26-27, and 29-30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The written description in this case has only set forth a peptide sequence which consists of or comprises the

sequence of SEQ ID No: 1, and therefore the written description is not commensurate in scope to the claims that read on a peptide sequence which consists of or comprises a sequence of SEQ ID No: 1 or 2 as claimed. The following *written description* rejection is set forth herein.

The claims recite "an amino acid sequence" of SEQ ID No: 1 as part of the invention. This reads on a single amino acid found within the sequence of SEQ ID No: 1. However, there does not appear to be an adequate written description in the specification as-filed that is representative of the single amino acid sequences derived from SEQ ID No: 1, which is encompassed by the claimed peptide sequences. The Guidelines for the Examination of Patent Applications Under the 35 U.S.C. 112, ¶ 1 "Written Description" Requirement make clear that the written description requirement for a claimed genus may be satisfied through sufficient description of a representative number of species by actual reduction to practice, reduction to drawings, or by disclosure of relevant, identifying characteristics, i.e., structure or other physical and or chemical properties, by functional characteristics coupled with a known or disclosed correlation between function and structure, or by a combination of such identifying characteristics, sufficient to show the applicant was in possession of the genus (Federal Register, Vol. 66, No. 4, pages 1099-1111, Friday January 5, 2001, see especially page 1106 3rd column).

Applicant does not appear to have reduced to practice the broad genus of "an amino acid sequence" derived from SEQ ID No: 1. Neither has Applicant provided a sufficient written description of any particular structure of "an amino acid sequence "

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derived from SEQ ID No: 1. "[A]n amino acid sequence" encompasses *any* amino acid sequence, as small as 2 amino acids, found within SEQ ID No: 1. Thus the genus of compounds encompassed by this phrase is extensive and the artisan would not be able to recognize that Applicant was in possession of the invention as now claimed.

Consequently, Applicant was not in possession of the instant claimed invention. See Regents of the University of California v. Eli Lilly and Co. 119 F.3d 1559, 43 USPQ2d 1398 (Fed. Cir. 1997). Adequate written description of genetic material "requires a precise definition, such as by structure, formula, chemical name, or physical properties,' not a mere wish or plan for obtaining the claimed chemical invention." Id. 43 USPQ2d at 1404 (quoting Fiers, 984 F.2d at 1171, 25 USPQ2d at 1606). The disclosure must allow one skilled in the art to visualize or recognize the identity of the subject matter of the claim. Id. 43 USPQ2d at 1406. A description of what the genetic material does, rather than of what it is, does not suffice. Id.

Again, applicant is directed to the Guidelines for the Examination of Patent Applications Under the 35 U.S.C. 112, ¶ 1 "Written Description" Requirement, Federal Register, Vol. 66, No. 4, pages 1099-1111, Friday January 5, 2001. Applicant is also invited to point to clear support or specific examples of the claimed invention in the specification as-filed.

*** It is noted that applicant may overcome this rejection by amending the claims to recite a peptide comprising "the amino acid sequence". ***

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 1-3,23-24,26-27, and 29-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Byrjalsen *et al* (WO 98/10291).

For examination purposes, the recitation of the term “comprising” is considered open-ended claim language and includes amino acid residues outside of the specified polypeptide antigen specificity. Therefore, “an isolated MHC class II antigenic peptide comprising” includes an unlimited number of amino acid sequences on each end of the peptide of SEQ ID No: 1.

Byrjalsen *et al* teach a protein termed vimentin (i.e. SEQ ID No: 3, see page 20) which is identical to a protein comprising SEQ ID No: 1 (see exhibit 1). In this case, the protein as disclosed by Byrjalsen *et al* also includes amino acid deletion because they discuss trypsin digestion of the protein (see page 9, for example). In addition, the disclosure of Byrjalsen *et al* also teaches the use of the claimed peptide as a diagnostic marker for cancer (see abstract for example). However, it should be noted the claimed peptide is a product per se, and the use of the peptide as a diagnostic marker is an intended use and carries no patentable weight.

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13. Claims 1-3,22-24,26-27, and 29-30 rejected under 35 U.S.C. 102(b) as being anticipated by Petersohn D. *et al* (DE10050274 -- reliance on abstract only).

For examination purposes, the recitation of the term "comprising" is considered open-ended claim language and includes amino acid residues outside of the specified polypeptide antigen specificity. Therefore, "an isolated MHC class II antigenic peptide comprising" includes an unlimited number of amino acid sequences on each end of the peptide of SEQ ID No: 1.

Peteresohn D. *et al* teach a protein termed vimentin and also disclose the use of vimentin fragments useful for treatment as a pharmaceutical composition and as a product useful for diagnostic purposes. (see abstract and exhibit 2). It should be noted the claimed peptide is a product per se, and the use of the peptide as a diagnostic marker is an intended use and carries no patentable weight.

Conclusion

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher H. Yaen whose telephone number is 571-272-0838. The examiner can normally be reached on Monday-Friday 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Helms, Ph.D. can be reached on 571-272-0832. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Christopher Yaen
Art Unit 1643
June 15, 2006


CHRISTOPHER YAEN
PATENT EXAMINER